

What is claimed is:

1. Fire escape apparatus for egress from a multi-storied building structure from an upper level thereof, including the roof, the apparatus comprising:

5        an upper, supporting entry ring member detachably anchored to said structure at an exit location thereof, including said roof, said entry ring member having attached to it one end of an elongate mesh tube, the mesh tube being substantially longer than the structure height  
10        from which escape is to be effected and being sufficiently long to enable extension downwardly from said exit location to the ground, said mesh tube having a lower, exit-opening support ring member attached thereto at its other end thereof,

15        said structure having permanently attached thereto, adjacent said exit location, one end of a guide wire or cable extending from said structure at a desired angle to the ground, said cable being permanently affixed at its other end to a ground anchor on the ground,

20        said elongate mesh tube having affixed thereto, at spaced-apart intervals along a length of said tube, a plurality of supporting block-and-pulley means, said pulleys of said block-and-pulley means engaging and riding upon said guide wire or cable,

whereby, when needed, said tube is deployed from said upper level downwardly such that said exit-opening ring member extends to ground level and said entry ring member affords entry therethrough into said tube at said exit location,

thereby permitting escape to ground level through said tube by a person entering said tube from said upper level.

2. The apparatus of claim 1 wherein said exit location is the roof of said building structure.

3. The apparatus of claim 1 wherein said exit location is an upper level opening in said building structure, including a window thereof.

4. The apparatus of claim 1 wherein said exit location is an upper level window of said building structure.

5. The apparatus of claim 1 wherein said plurality of block-and-pulley means are spaced apart at equal intervals along a length of said guide wire upon deployment of the escape .

6. The apparatus of claim 5 wherein said block-and-pulley means are spaced apart along the entire length of said guide wire.

7. The apparatus of claim 5 wherein said block-and-pulley means are each spaced apart one-from-another a distance within the range of five feet to seven feet.

5 8. The apparatus of claim 7 wherein said block-and-pulley means are spaced apart at approximately six foot intervals.

9. The apparatus of claim 1 wherein said guide wire or cable is constructed of stainless steel.

10 10. The apparatus of claim 1 wherein said block-and-pulley means each comprise a block and dual pulleys.

11. The apparatus of claim 1 wherein said guide wire forms an angle to the ground which is between 30° and 90°.

15 12. The apparatus of claim 11 wherein said guide wire forms an angle to the ground which is approximately 30°.

13. The apparatus of claim 11 wherein said guide wire forms an angle to the ground which is approximately 45°.

20 14. The apparatus of claim 11 wherein said guide wire forms an angle to the ground which is approximately 60°.

15. The apparatus of claim 1 including a sleeve covering at least a portion of said tube and extending from said entry ring member downwardly a distance from said entry ring member.

5 16. The apparatus of claim 15 wherein said sleeve extends a distance of at least twenty feet downwardly from said entry ring member along the length of said tube.

10 17. The apparatus of claim 16 wherein said sleeve extends a distance of at least sixty feet downwardly from said entry ring member along the length of said tube.

18. The apparatus of claim 15 wherein said sleeve is constructed of Nomex® synthetic fabric.

15 19. The apparatus of claim 1 including a canopy disposed over the upper portion thereof.

20. The apparatus of claim 19 wherein said canopy is retractably disposed over the upper portion of said apparatus.

20 21. The apparatus of claim 19 wherein said canopy is constructed of Kevlar® fabric.

22. The apparatus of claim 1 wherein said mesh tube is constructed of cords intertwined to form a square mesh.

23. The apparatus of claim 1 including at least one longitudinal reinforcing cord affixed at one end thereof to said entry ring member, intertwining said mesh tube along its length thereof, and being affixed at its other end to said exit-opening, support ring.

24. The apparatus of claim 23 wherein said reinforcing cord has a tensile strength of at least 9200 psi.

25. The apparatus of claim 22 wherein at least two cords of said mesh tube connect said tube and longitudinal reinforcing cord through each supporting block of said block-and-pulley means at each point of connection with said tube.

26. The apparatus of claim 1 wherein the openings in said mesh tube are large enough to permit finger insertion therein but small enough to prevent foot insertion therethrough.

27. The apparatus of claim 22 wherein the square openings in said mesh tube have a side dimension of about one and one-half inches.

28. The apparatus of claim 1 wherein said tube has inside diameter sufficiently large so as not to restrict passage of a person escaping therethrough, whereby said escaping person can control his rate of descent by pushing outwardly with his feet and/or by grasping the mesh anywhere within the tube.

29. The apparatus of claim 1 wherein said mesh tube has an inside diameter in the range of about 3 feet to about 4 feet.

30. The apparatus of claim 22 wherein said mesh cords are constructed of a fire resistant material.

31. The apparatus of claim 30 wherein said fire resistant material is fire resistant nylon.

32. The apparatus of claim 1 wherein said mesh tube is constructed of fire resistant nylon.